FACTORS RELATED TO SUCCESS IN INSTRUMENTAL MUSIC

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PREFACE

The factors which determine the success or failure of an individual or group of individuals in any chosen field of education has always been an interesting and much discussed problem. Much research has been conducted by many noted authorities in the field of education, trying to provide a set of rules, by which a student's success may be predicted.

Several such investigations have been conducted along this line in the field of music. However, most of them have been confined to one factor or characteristic.

This thesis reports the findings on several of these characteristics of musicians, in the belief that a knowledge of the relation several factors have to a musician's success will be of more value to the instructor than such knowledge of one factor only. Much has been said about this problem, many people have expressed their opinions on the matter, but this is an attempt to record some facts of the case, backed by actual research.

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The author wishes to make grateful acknowledgment to Dr. M. R. Chauncey for much helpful criticism and advice, and whose encouraging suggestions proved an invaluable aid.

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G. M. V.

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CHAPTER I

INTRODUCTION

The present investigation reports the findings on several characteristics relative to a student's success in instrumental music, using the Stillwater High School Band and Orchestra members as subjects.[1] This study was conducted during the school year of 1936-37, in the public school system of the city of Stillwater, Oklahoma, using approximately 100 members of the high school band and orchestra. These students were divided into three groups by the instructor; the twenty best students (those who had shown the most musical progress and were of most value to the band or orchestra), the 60 average, and the twenty poorest musicians (those who had shown the least progress). Only those students were used in this study who had been in the Stillwater school system for at least two years, in order to equalize individual opportunities as much as possible.

At this point it might be stated that all of the students had studied instrumental music long enough that they had a fair chance to show what they could do toward becoming musicians, and they had all reached a fair degree of advancement. But in a group this size there is a wide enough scope of ability to justify the accuracy of the study.

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[1] Students from the ninth to twelfth grades, inclusive, were used. The seventh and eighth grades were not used, to avoid the differences in age and training, when too wide a scope of age is covered.

During the past fifteen years the nation has witnessed the development of instrumental music in our public schools by leaps and bounds, developing from strictly an extra-curricular activity until now we find it firmly established as one of the recognized worthwhile subjects supported by our public schools.

Hand in hand with this remarkable development of the subject arises the problem of what students are best suited to profit by this instruction furnished by the schools. Who is best suited to succeed? Why do some students make remarkable progress in the study of this subject? Why do others fail? Much has been said, but little done to really find the actual reason for this condition.

Problems of the Investigation

1. What elements go to make up a successful musician from an instrumental music teacher's viewpoint?

2. What elements go to make up an unsuccessful musician from an instrumental music teacher's viewpoint?

3. What elements are common to both, and what elements are not common to both groups?

4. Can we determine by this study a fairly accurate method of forecasting the success or failure of a student taking up the study of instrumental music?

5. What elements are necessary to determine whether it would be a wise thing to study music as a vocation?

This investigation should be of value to those who are interested in music from an educational standpoint as well as to those who are interested in following this profession as a vocation. This report seems to be a more reliable source of information on the subject than opinion founded on very little or no actual scientific research.

CHAPTER II

TYPES AND SOURCES OF DATA

In conducting this study many characteristics were taken into consideration. Many things may affect an individual's success, so as many of these as possible were studied.

Below are listed these factors or characteristics and the methods used to examine them.

1. Natural musical ability - Seashore Test (pitch and intensity).
2. General acquired musical ability - Kwalwasser-Ruch Test of Musical Accomplishment for Grades IV-XII, inclusive.
3. Family background - Sim's Socio-Economic Score Card.
4. Marks in other subjects - Records in the Principal's office.
5. I. Q. - The Detroit Advanced General Intelligence Test.
6. Effort - Questionnaire (instructor).
7. Health - Questionnaire (instructor).
8. Participation in church work - questionnaire (instructor).
9. Educational and occupational intention - questionnaire (instructor).
10. Likes and dislikes in regard to music - questionnaire (instructor).

The questionnaire mentioned in sources of data for factors 6, 7, 8, 9, and 10 was compiled by the author of this study, and a copy of it is shown at this time.

QUESTIONNAIRE

1. Your name_____2. Boy or girl_____.

3. Date of last birthday_____4. Your age at that time___.

5. Grade you are in now____6. Number of high school credits_____.

7. Number of years you have studied instrumental music in school_____.

8. How many private lessons have you had?_____

9. List of instruments you play or are learning to play.

Name	Make	Purchase Price	Years of Service	Condition
1.				
2.				
3.				
4.				
5.				

10. Other instruments at home_____

11. Have you a radio?_____12. Have you a phonograph?__

13. Has your father ever studied a musical instrument?_____

14. Has your mother ever studied a musical instrument?_____

15. Are there any other musicians in your immediate family?_____

16. Are you a member of a church?_____

17. Do you attend church regularly?_____18. Sunday School?

19. List the five musical radio programs you most enjoy in order, the one most enjoyed first, the next best, second, etc.

    1. _____ 4. _____

    2. _____ 5. _____

    3. _____

20. How many days of school have you missed in the last two years because of poor health?_____

21. Name all the outside activities and organizations you are a member of in order, the one you like best first, next best, second, etc._____.

22. At what age did you start playing a musical instrument?

23. What grade were you in?_____

24. Why did you start playing a musical instrument?_____

25. How much home practice did you average per day the first year that you studied?_____

26. How much home practice have you averaged per day since you started studying music?_____

27. Do your parents require you to practice at home?_____

28. Do your parents ask you to practice at home?_____

29. Why do you practice at home?_____

30. Name the offices you have held in organizations, clubs, etc., in the last three years_____

31. Name five reasons you play in the band or orchestra.

    1. _____ 4. _____

    2. _____ 5. _____

    3. _____

32. Do you plan to attend college?_____

33. What do you intend to do as a life's work?_____

34. Name the five musical compositions we have played in band or orchestra, that you like best.

1. _____ 4. _____

2. _____ 5. _____

3. _____

This questionnaire was administered to the students involved in this study, personally by the author of the questionnaire, thus making it possible to explain any point the student was not clear on. So the answers were all given with a clear understanding by the student of what was wanted in the answer. These data collected by the use of this questionnaire should be as reliable as personal interviews with each individual student.

1. Natural Musical Ability.--The first two parts of Seashore's Test on "Measures of Musical Talent," by Carl Emil Seashore, Professor of Psychology and Dean of the Graduate College in the State University of Iowa.

The test is divided into six parts but only the first two, pitch and intensity, were used. The test is used to determine the natural or inborn ability of the student tested. This test is given with the use of phonograph records, and is easily given and scored.

2. General Acquired Musical Ability.--The Kwalwasser-Ruch Test of Musical Accomplishment was used. This test is designed to measure the achievement of pupils in the

typical public school music course in the elementary and high school grades.

3. Family Background.--Score Card of Socio-Economic Status by Verner M. Sims, University of Alabama. This score card was developed for the purpose of providing a simple, convenient, and objective device for ascertaining and recording the general cultural, social, and economic background furnished by the homes of school children. The score card is intended for use with pupils of grades IV to XII, inclusive. It can be applied either to individual pupils or to groups of pupils.

4. Marks in Other Subjects.--The records in the Principal's office were examined, and the average grade for all subjects the student had taken the first semester 1936-37, except music, were recorded.

5. I. Q.--Detroit Advanced Intelligence Test, Form V, by Harry I. Baker. This is a group intelligence test, so it is very much simpler to give than an individual test; however, this particular test is considered very accurate.

6. Effort.--Data for this factor were furnished by the answers to questions 8, 9, 22, 25, and 26 of the questionnaire.

8. How many private lessons have you had?

9. List of instruments you play or are learning to play.

22. At what age did you start playing a musical instrument?

25. How much home practice did you average per day, the first year that you studied?

26. How much home practice have you averaged per day since you started studying music?

7. Health.--Only one question was asked on this subject, which was question 20 of the questionnaire.

20. How many days of school have you missed in the last two years because of poor health?

8. Participation in Church Work.--Data for this factor were furnished by questions 16, 17, and 18 of the questionnaire.

16. Are you a church member?

17. Do you attend church regularly?

18. Do you attend Sunday school regularly?

9. Educational and Occupational Intention.--Data were compiled from questions 30, 31, 32, and 33 of the questionnaire.

30. Name the offices you have held in organizations, clubs, etc., in the last three years.

31. Name five reasons you play in the band or orchestra.

32. Do you plan to attend college?

33. What do you intend to do as a life's work?

10. Likes and Dislikes in Regard to Music.--The results were compiled on questions 19, 21, and 34 of the questionnaire.

19. List the five musical radio programs you most enjoy, in order, the one most enjoyed first, the next best second, etc.

21. Name all the outside activities and organizations you are a member of in order, the one you like best first, next best second, etc.

34. Name the five musical compositions we have played in band or orchestra, that you like best.

CHAPTER III

THE RELATION OF CERTAIN FACTORS TO SUCCESS IN INSTRUMENTAL MUSIC

Natural Musical Ability

Seashore's test on "Measures of Musical Talent" is recognized by all leading authorities on the subject as a very reliable test on the matter of natural musical ability. Natural ability is that ability which a student is born with. He either has it or he doesn't; natural ability in itself cannot be developed. Seashore has conducted an exhaustive study on the subject of natural musical ability, and has definitely proven this to be a fact. So natural ability is a characteristic that can be examined early in a music student's career, or even before he starts the study of music.

Only the first two parts of the Seashore test were used in the data collected on natural ability. Table I shows the distribution of the results.

The average grades on the test were, for the twenty best musicians,88.25; the 60 students in the average group, 84.55; and the twenty poorest, 80.2. This seems to point to the fact that the greater the natural ability the better the musician. However, if the distribution shown in Table I is examined, we find this is not absolutely true. We find some of the poorest musicians have very good natural ability. By examining Table I further, we do find that all of the best musicians have high natural ability. This

TABLE I

DISTRIBUTION OF SCORES ON SEASHORE'S PITCH AND INTENSITY TEST

Scale	Twenty Best Musicians	Whole Group	Twenty Poorest Musicians
92-93	1	3	
90-91	7	13	
88-89	5	17	4
86-87	3	18	3
84-85	3	19	3
82-83	1	6	
80-81		9	2
78-79		3	
76-77		4	3
74-75		2	1
72-73		1	1
70-71		3	1
68-79		1	1
66-67			
64-65			
62-63			
60-61		1	1
N	20	100	20
Average	88.25	84.55	80.2

points to the conclusion that, while high natural ability is not a sure sign of great success, it certainly points to the conclusion that any person who does not have good natural ability will not be a good musician. In other words we cannot predict a student's success, but we certainly can predict his failure.

It should be pointed out that all of the students tested have what is considered by Seashore as satisfactory natural ability to become successful musicians.

Therefore, any student who is tested and found low in natural ability should, if he chooses to play a musical instrument, never expect to become a first-class performer, and, if the teacher has the right to select his students, he should not expect to make a good musician of that type of student.

As students of all degrees of natural ability enroll in instrumental music in the Stillwater public schools, and it is easily shown by Table I that almost everyone of the students with low ability never reached the advanced group, the musical instruction furnished the students of low natural ability by the teacher, was a total loss as far as the advanced band and orchestra were concerned.

General Acquired Musical Ability

The Kwalwasser-Ruch test of musical accomplishment by Jacob Kwalwasser and G. M. Ruch[1] is designed to measure

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[1] Jacob Kwalwasser, Ph. D., Professor of Music Education, Syracuse University, Syracuse, New York and G. M. Ruch, Ph.D., Professor of Education, University of California, Berkely.

the achievement of pupils in the typical public school music course in the elementary and high school grades. Every item in the test has been subjected to repeated experimentation, and the items finally included represent materials which public school pupils reasonably can be expected to master in the course of the first twelve grades of instruction in music

The validity of the Kwalwasser-Ruch Test of Musical Accomplishment rests primarily upon the specifications adopted by the Music Supervisors' National Conference.[2] This test parallels the standard course of study in music adopted by the Supervisors' National Conference.

The scores and distribution of these scores are illustrated by Table II. It will be noticed that the median of the entire group is well above the national median score of grades 9-12, inclusive, which is set at 156. This is to be expected as these students, being interested in music to a greater degree than the average student of public school music, have come in contact with more instruction of this type. The twenty best musicians have a median score of 222 which is even above the 90 percentile median score of the nation of 219. However,

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[2] Music Supervisors' National Conference, Bulletin No. I, 1921, containing a report on a standard course in music for graded schools, made at the Fourteenth Annual meeting held in St. Joseph, Missouri, April 4 to 8, 1921.

TABLE II

DISTRIBUTION OF SCORES ON KWALWASSER-RUCH TEST OF MUSICAL ACCOMPLISHMENT

Scale	Twenty Best Musicians	Whole Group	Twenty Poorest Musicians
240-249	1	1	
230-239	7	8	
220-229	4	10	
210-219	3	11	2
200-209	3	10	1
190-199	2	11	1
180-189		5	1
170-179		10	4
160-169		10	2
150-159		6	1
140-149		6	2
130-139		5	4
120-129		3	
110-119		1	
100-109			
90-99		1	
80-89		1	1
70-79			
60-69		1	1
N	20	100	20
Average	222	183.9	159

they have received more instruction along this line than the students of the nation. As this is a test of acquired ability the results are hard to evaluate because of the fact that some students might have had more instruction along this line than others.

This test might prove valuable in testing students as they come to the instructor, all with the same amount of instruction as the case might be in one certain school system. It is probably a fact that students who make unusually high scores on the test, or scores above the average at least, have either greater ability or have shown more interest in the subject than the students with low scores.

The test as a factor for determining a student's success in instrumental music, in the opinion of the writer, would be of very little value unless all of the students tested had taken exactly the same amount of instruction on the subjects involved in the test.

Family Background

For this part of the investigation, Sims Score Card for Socio-Economic Status by Verner M. Sims was used. This score card was developed to ascertain and record the general cultural, social, and economic background furnished by the homes of school children. The present score card is the product of somewhat extended experimentation carried on at the School of Education, Yale University. It represents a simplified revision, of the third form of score

card tried by Mr. Sims. The score card is intended for use with pupils of Grades IV to XII, inclusive. It can be applied to either individual pupils or to groups of pupils. About 20 to 25 minutes should be available for administering.

Provisional levels of Socio-Economic Status have been set up using a fairly unselected group of 686 sixth, seventh, and eighth grade children from the schools of New Haven, Connecticut. Using this table as a guide, a score of 10 is considered medium or average.

Table III will show the distribution of the entire group as well as the distribution of the best and poorest students, musically. Using the standard set up by Sims, the medium of the entire group is in the 88.5 percentile, or a very high rating.

The disadvantage of the score card is the fact that the socio-economic status of communities varies with localities.[3] In a survey conducted by Dr. M. R. Chauncey in the eighth and ninth grades of the Stillwater public schools in the school year 1928-29,[4] the mean of the 243 students tested was 18.5, which was somewhat higher than

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[3] Socio-Economic Status of a Group of School Populations. Ruston, La. Grades 5-11, 400 cases, average score 16.8. New York City, Lincoln School, Average score 27.2 (all grades). New Haven, Conn. Grades 6-8, 638 cases, average score 13.6. Baltimore, Maryland, grades 9-12, 1216 cases, average score 18.95.

[4] Journal of Educational Research, September, 1929.

TABLE III

DISTRIBUTION OF SCORES ON SIM'S SOCIO-ECONOMIC SCORE CARD

Scale	Twenty Best Musicians	Whole Group	Twenty Poorest Musicians
34		1	
33	1	1	
32		2	
31		3	
30	3	6	1
29	2	10	2
28	2	10	1
27	1	6	1
26	1	3	
25	1	6	2
24	1	7	
23	1	11	3
22	1	2	1
21	2	5	1
20	1	4	1
19		7	2
18	1	3	1
17	1	4	
16		1	1
15		2	2
14		1	
13	1	1	
12		2	
11			
10			
9		1	1
8		1	
Average	24.42	23.85	22.76

the standard set up by Sims. However, this points to the fact that the students tested in the band and orchestra have a much higher socio-economic rating than the average student in the Stillwater schools.

If we did not investigate the situation any further we might draw the conclusion that it is necessary to have a splendid family background before one can be a good musician. In this particular case there is probably a definite reason for this unusual situation. Many of the students in the advanced band and orchestra started their careers in the grade schools of Stillwater. As there is no free instruction offered to grade school students in Stillwater in instrumental music, the students must pay tuition fees for their instruction, so the majority of the students found participating in instrumental music in the grade schools are from families better off economically than the average. This is, no doubt, a very important factor in the fact that the students of the advanced instrumental groups in the high school have a high socio-economic rating. Then, too, there is some little extra expense incurred over the period of a year, such as enrollment fees, uniform fees, trips, and instruments.

In reading Table III we might draw the conclusion that, while there is little difference, there is some indication that the more successful the parents socio-economically, the more successful the child musically.

However, there is not enough difference in this case to justify a statement that much significance can be placed on the socio-economic rating of a student. In other words as far as the present data indicate, it would be impossible to look at the family background of any student and predict, with any degree of accuracy, the success a pupil will have in instrumental music.

Marks in Other Subjects

The records in the Principal's office were examined, and the average grade for all academic subjects the student had taken the first semester, 1936-37, except music, was recorded.

In compiling the results we find the following: the twenty best musicians had an average grade of 88.63, the whole group, 84.49, and the twenty poorest musicians, 79.48. This shows very definitely, as far as the group is concerned, that grades in other subjects are a very reliable indication of a student's success in instrumental music.

Table IV shows the distribution of the average grades the students made in other subjects. By examining Table IV we find the following facts to be true. Fifty per cent of the 20 best musicians are found in the best 25 per cent of the whole group academically, and 30 per cent of the poorest students musically are found in 7 per cent of the poorest students academically. This further points to the

TABLE IV
DISTRIBUTION OF AVERAGE GRADES IN OTHER SUBJECTS

Scale	Twenty Best Musicians	Whole Group	Twenty Poorest Musicians
96-97	1	1	
94-95	2	6	
92-93	2	5	
90-91	5	13	1
88-89	4	18	3
86-87	2	10	3
84-85		9	2
82-83	2	12	2
80-81	1	5	2
78-79		3	
76-77		3	
74-75		2	1
72-73		2	1
70-71		3	2
68-69			
66-67			
74-65			
62-63			
60-61			
58-59		2	2
Average	88.63	84.49	79.48

fact that students successful in academic subjects stand a very good chance to succeed in music. While students with low grades are much less likely to succeed in instrumental music.

There is no doubt, in the opinion of the writer, and the investigation certainly bears this out, that grades in other subjects are one of the most reliable methods to be found of predicting a student's success in instrumental music.

Intelligence Quotients

For this part of the study the Detroit Advanced Intelligence Test, Form V, by Harry I. Baker, was used. This is a group intelligence test, is simpler to give than the individual type, and is considered very reliable.

The average I. Q. of the whole group was 107, the 20 best musicians having an average I. Q. of 113.89, and the 20 poorest muscians having an I. Q. of 100.1. This points to the fact that as far as the group is concerned the higher the I. Q., the better the musician.

In looking at Table V, where the distribution of the scores is shown, it is found that there is much overlapping between the good and poor groups. However, 35 per cent of the best musicians are found in 13 per cent of the entire group, and 50 per cent of the poorest among 10 per cent of the entire group. So there is still a strong indication that the higher the I. Q. the better the musician.

TABLE V
RATING OF STUDENTS EXAMINED ON FORM V
OF THE DETROIT ADVANCED INTELLIGENCE TEST

Scale	Twenty Best Musicians	Whole Group	Twenty Poorest Musicians
139-41	1	1	
136-38		2	
133-35	1	1	
130-32	1	1	
127-29		1	
124-26		2	1
121-23	4	5	1
118-20	2	8	
115-17		8	
112-14	6	10	1
109-11		4	1
106-08	2	11	4
103-05	1	8	1
100-02		8	
97-99		6	3
94-96		6	2
91-93	1	9	1
88-90		4	1
85-87	1	4	2
82-84		1	1
Average	113.89	107	100.1

The almost complete absence of very low I. Q's will be noticed. This points to the fact that a student should have a satisfactory I. Q. before expecting to pursue instrumental music with any degree of success. In checking the individual I. Q. of each student, this fact was also notice that the more advanced in school the group of students, the higher the average I. Q. This certainly justifies the statement that, although the student with a low I. Q. pursues the study of instrumental music with a reasonable amount of success, he loses interest in music much sooner than the student with a higher I. Q. This leads to the recommendation from the viewpoint of the instructor who is interested in maintaining an organization that he can depend on, or in training a student he can depend on to stay interested in instrumental music throughout his entire high school career, the student with the higher I. Q. is more desirable. This statement is justified for these two reasons: first, he will more likely succeed and second, he will more likely stay interested in music much longer.

Effort

In any enterprise effort has always been considered a rather important factor. In instrumental music all students put forth about the same amount of effort when they are playing in a group. So there is really no method of checking effort accurately while the students are

performing as a group. So in checking effort, the data collected were on the amount of effort extended outside of the regular playing the students did as a group.

Some students start their musical careers earlier in life than others, and in the writer's opinion, everything else being equal, the student who starts playing a musical instrument a year or two earlier than another is putting forth more effort. In answer to the question, "How many years have you studied instrumental music in school," it was shown that the best musicians started studying on an average of almost two years sooner than the average or poor students. The twenty best musicians had taken instrumental music in school for an average of 5.65 years, the average students, 3.88 years, and the poorest musicians, 3.68 years. As the best students were no older on the average, than the other two groups, this is definite proof that the best musicians started at a younger age. (The distribution of these students in regard to the number of years instrumental music was studied in school is shown in Table VI.) On the other hand, as there is practically no difference between the average and poor groups, the data seems to point to the fact that as far as the average student is concerned, one or two years difference early in his musical career, will make very little difference. The fact remains, however, the best students excel in this phase of effort.

TABLE VI
DISTRIBUTION OF NUMBER OF YEARS EACH STUDENT HAS STUDIED MUSIC IN SCHOOL

Years	Twenty Best Musicians	Sixty Average Musicians	Twenty Poorest Musicians
9	1		
8½	1		
8		1	1
7½	2	1	2
7	1	3	
6½	3	1	
6	1	1	
5½	5	5	
5	1	5	1
4½	3	6	1
4	1	6	3
3½		9	1
3		4	2
2½		5	4
2		2	4
1½	1	8	1
1			
½		3	
Average	5.65	3.88	3.68

It is interesting to know why music students practice outside of the group rehearsals. In this particular case the reasons given are listed in Table VII.

TABLE VII
REASONS FOR HOME PRACTICE

Reasons	Groups		
	Best	Average	Poorest
To improve	.25	.58	.40
Like to or want to	.45	.15	.28
Hold my chair in the band or orchestra[5]	.10	.18	.18
To stay in the band or orchestra	.05	.07	.10
Teacher's request	.10	0	0
So I can take private lessons	.05	0	0
To be a better musician	0	.02	0
Parents' desire	0	0	.02
Think I should	0	0	.02
Total	1.00	1.00	1.00

[5] A systematic method of tryouts is used in these organizations, so that all students are in active competition for the better places.

It may be seen from Table VII that all of these students practiced for about the same reason. Therefore, the reason a student practices at home has little or no effect on his ability as a musician.

Many teachers feel that it is the parents' duty to see that the student does his home practice. Here is how the parents feel about the same matter. In answer to the question, "Do your parents require you to practice at home," 90 per cent of the students said "No," and 10 per cent, "Yes." The answers by groups are shown in Table VIII.

TABLE VIII
HOME PRACTICE REQUIRED BY PARENTS

	Twenty Best Musicians	Average Musicians	Twenty Poorest Musicians
Yes	.10	.10	.05
No	.90	.90	.95

In answer to the question, "Do your parents ask you to practice at home," the results are shown in Table IX.

TABLE IX
HOME PRACTICE REQUESTED BY PARENTS

	Twenty Best Musicians	Average Musicians	Twenty Poorest Musicians
Yes	.55	.82	.75
No	.45	.18	.25

So the statement can be made that parents will lend their moral support but not their physical support in encouraging home practice. As Table VIII shows, a very small percentage of the students, (in fact, 1 out of 100 or 1 per cent), give the real reason for their practice, because the parents require it, the parents play a very small part in the effort extended by the students at home.

Table X summarizes the answers to the question, "How much home practice did you average per day the first year, and how much home practice have you averaged per day since you started studying music?"

TABLE X
HOME PRACTICE PER DAY IN MINUTES

Average of	20 Best Musicians	60 Average Musicians	20 Poorest Musicians	Average for the 100 Musicians
First Year	27.25"	36.76"	35"	34.78"
Entire Time	28.35"	29.82"	24.35"	28.6"

Table X seems to prove that the amount of home practice done by the three groups had little or no effect upon their progress, as they all did about the same.

No doubt the better students accomplished more in the time they practiced than the other two groups. The better students did not practice at home as much the first year as the others, because it was probably not necessary in order to keep up with the class. But practice surely does not seem to be the answer to the problem as to what makes good and poor musicians.

Another phase of effort worth consideration is private lessons. The best musicians have averaged 114 private lessons each; the average group, 38.4; and the poorest, 33. These data cannot be accepted at face value, however, as it is a fact that most of the private lessons these students have had were taken after they had already become good, average, or poor musicians. Also, it is an accepted fact that most people like to do the things they can do well, so the better students took private lessons because they were already successful, and as is seen, there is very little difference between the average and poor groups.

As a brief summary of effort, it can easily be seen that effort seems to play little or no part in the success or failure of a music student, as far as instrumental music in the public schools is concerned.

It is possible for students to divide their time between two or more instruments and still be more successful than students working on only one instrument. The better group in this case divided their time between 3.25 instruments, whole the average group played 2.13, and the poor group, 2.[6]

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[6] Piano was counted in these figures and accounted, in many cases, for the second or third instrument. No significance can be placed on the fact that several played piano as far as their success is concerned, as the piano players were very evenly divided among the three groups.

Health

Only one question was asked on this subject, which was, "How many days of school have you missed in the last two years because of poor health?" This seems to be a better check on the health of a student than examining the records of school attendance, as there are many other reasons students miss school besides poor health.

Table XI shows the distribution of the answers to this question.

The average number of days each group missed per year was: 20 best musicians, 5.4; 60 average musicians, 3.7; and the 20 poorest musicians, 2.4. These data seem to indicate then, that if a student is healthy enough to attend school with any regularity, the condition of his health will have little or no effect upon his ability as a musician.

Participation in Church Work

The following data were collected:

1. Church membership.
2. Church attendance.
3. Sunday school attendance.

We have always been taught that church membership, church and Sunday school attendance are factors which have a good effect upon the school child in many ways. The religious training received incorporates training in character, etc. While this is not an attempt to make an

TABLE XI
DAYS OF SCHOOL MISSED BECAUSE OF POOR HEALTH
IN THE LAST TWO YEARS

Days Missed	Twenty Best Musicians	Average Group	Twenty Poorest Musicians
0	3	16	12
1	2	7	
2	1	5	1
3	1	5	1
4		2	
5	4	5	
6		4	1
7	1		1
8	1		
9	1	1	
10	1	4	
12	1	2	2
14	1	2	1
15		1	
20	1	1	
24		1	
25	1	2	
40			1
80	1		
120		1	

accurate check on the character of the individuals involved in this study, data on participation in church work should be at least an indication of the amount of training the students have had in religious education, which certainly involves the subject of character.

Table XII tabulates the answers to the following questions:

1. Are you a member of a church?
2. Do you attend church regularly?
3. Do you attend Sunday school regularly?

TABLE XII

CHURCH MEMBERSHIP AND CHURCH AND SUNDAY SCHOOL ATTENDANCE

		Twenty Best Musicians	Sixty Average Musicians	Twenty Poorest Musicians
Church Membership	Yes	.80	.80	.80
	No	.20	.20	.20
Regular Church Attendance	Yes	.60	.50	.30
	No	.40	.50	.70
Regular Sunday School Attendance	Yes	.60	.92	.70
	No	.40	.08	.30

The results shown in Table XII do not show enough difference between the three groups to justify the statement that participation in church work plays a very important part in the success of a student in instrumental music. It might be noticed, however, that in this particular case, the average of the whole group is very high in all three items mentioned.

Educational And Occupational Intention

Data were compiled on the following questions:

1. Do you plan to attend college?
2. What do you intend to do as a life's work?
3. Name five reasons you play in the band or orchestra.
4. Name the offices you have held in organizations, clubs, etc. in the last three years.

TABLE XIII
EXPECTED COLLEGE ATTENDANCE

Do You Plan to Attend College	Twenty Best Musicians	60 Average Musicians	20 Poorest Musicians
Yes	1.00	.98	.95
No	0	.02	.05

It must be realized the situation in Stillwater is different than will be found in most places, due to the fact that the Agricultural and Mechanical College of the State of Oklahoma, is situated in the city. This no doubt causes a much higher percentage of high school students to plan to attend college than if there was no college situated here. However, this 98 per cent average is higher than found throughout the entire high school,[7] so this may be responsible to a small extent for some outside motivation of the entire group. Since 98 of the 100 cases planned

[7] Records available in the high school Principal's office showed that 89 per cent of the student body intended to go to college.

to attend college, data on this question proved useless as far as determining the relation this item would have to success in instrumental music.

Table XIV records the answers to the question, "What do you intend to do as a life's work?" It will be noticed by studying Table XIV that 55 per cent of the best musicians have chosen music as their life's work. This shows one of two things: they are either ambitious to succeed in their chosen field and are working hard at it, or they have chosen this field as a vocation because they are successful in this line at present. I am inclined to discount the former, and choose the latter reason. Outside of this one fact, there seems to be nothing very significant pointed out in the findings on choice of life's work in regard to success in instrumental music.

Reasons for playing in the Band or Orchestra

The question was asked, "Name five reasons you play in the band or orchestra. The students were requested to list these reasons in order of importance to them. The first three of the five reasons were used as data for this part of the study. Various reasons were given, but when they were all classified, they all fell under nine general reasons.

TABLE XIV

EXPECTED LIFE'S WORK

Vocations	20 Best Musicians	60 Average Musicians	20 Poorest Musicians
Don't Know	4	17	5
Engineer		10	7
Music Teacher	11	6	
Secretary or Stenographer	1	3	1
Doctor	1	4	
Journalism	2	1	
Musician		3	
Teacher		3	
Dress Designer		1	1
Aviator			2
Home Economics		1	1
Business Man		1	1
Artist		1	
Social Service		1	
Commerce		1	
Optometrist		1	
Dietition	1		
Radio Operator		1	
Nurse		1	
Dentist		1	
Agronomer		1	
Attorney		1	
Designer		1	
Speaker			1
Research Worker			1

Table XV lists these reasons and the per cent in each group that mentioned each of them. There is nothing in this table to justify the statement that students who play in the band or orchestra for one reason will progress better than students who play for some other reason. The information furnished by the table may be surprising news to some music teachers who say, "Pupils should take music for the love of music, and the teacher is a failure who does not find that condition prevalent among his students." The results point out very clearly that music appreciation is about the last reason students play in the band or orchestra. However, the end justifies the means. Interest the pupil in the band or orchestra by making it fun or pleasure, and by giving him trips, and when he is through with the band or orchestra, he will be a consumer of good music. Many teachers seem to think that if the pupil is not taking music for credit, he is taking it for the love of music, but Table XV clearly points to the fact that this is not true. A very small percentage of the students in this case take music for credit, and also a very few take music because of appreciation of music. But, the writer repeats, get a student into the band or orchestra for any reason and if he becomes much of a musician, he becomes a high type consumer of music, and truly learns to appreciate good music. Why? Because he understands music. The only successful method of developing consumership of

TABLE XV
REASONS THE STUDENTS PLAYED
IN THE BAND OR ORCHESTRA

Reasons	20 Best Musicians	60 Average Musicians	20 Poorest Musicians
(1) Like to play (fun, pleasure)	90%	77%	90%
(2) Trips	55	87	95
(3) To Learn to Play	90	55	45
(4) Parents' Wish	10	30	50
(5) To be with Friends	25	22	0
(6) Credit	5	15	0
(7) Musical Career	15	0	0
(8) Music Appreciation	5	7	0
(9) Good Training	0	3	5

good music is by teaching music to the consumer. For example, why can one Frenchman enjoy listening to another Frenchman talk, while an Englishman, who knows no French, cannot enjoy the talk? Because they both speak the same lenguage, they both know French. Music appreciation can only be taught by first teaching music.

Leadership

In answer to the question, "Name the offices you have held in organizations, clubs, etc. in the last three years,"

a marked difference was shown between the three groups. The best average 3.8 offices; average, 2.8; and the poorest, 1.9. The distribution of offices held by the individuals is shown in Table XVI. This points to the fact that the students who excel in musicianship also seem to excel in leadership to about the same degree.

TABLE XVI
NUMBER OF OFFICES STUDENTS HELD IN ORGANIZATIONS CLUBS, ETC., IN THE PAST THREE YEARS

Number of Offices Held	Twenty Best Musicians	Sixty Average Musicians	Twenty Poorest Musicians
0	1	9	3
1	3	10	5
2	1	10	6
3	2	10	4
4	8	5	1
5	1	11	1
6		2	
7	4		
8			
9		2	
10		1	

Also the fact that the better musicians are interested in more activities than the average or poor musicians seems not to retard their progress.

Likes and Dislikes in Regard to Instrumental Music

The results were compiled on the following questions:

1. Name all the outside activities and organizations you are a member of, in order, the one you like best first, next best second, etc.

2. Name the five musical radio programs you most enjoy, in order, the one most enjoyed first, the next best second, etc.

3. Name the five musical compositions we have played in the band or orchestra, that you like best.

In answer to the question on outside activities the student was instructed to list all outside interests, even movies, skating, Sunday school, and the like, as well as outside organizations of which he was a member. The results were compiled noticing the order in which band or orchestra was ranked among the other activities mentioned. The twenty best musicians ranked instrumental music 2.05; the average group, 2.57; and the twenty poorest musicians, 2.35, which shows no marked difference between the three groups. In other words the interest shown in instrumental music, or the regard the student has for music as far as his interest is concerned has little or nothing to do with his success in the matter.

In regard to the question, "Name the five radio programs you most enjoy, in order, the one you like best first, next best second, etc.," the answers were classified under two headings, either classical or popular music.

Table XVII reports the answers to this question on a percentage basis.

TABLE XVII
TYPE OF RADIO PROGRAMS ENJOYED

Radio Programs	Twenty Best Musicians	Sixty Average Musicians	Twenty Poorest Musicians
Classical Music	.60	.42	.25
Popular Music	.40	.58	.75

At first glance we might be led to believe that this is an important factor in students' success in instrumental music. But the real reason the better type musician enjoys better music is the fact that he knows more about music. He is a more educated listener, so knowing more about good music, he enjoys good music more than the average or poor musician. The average or poor musician knows less about music, so he enjoys the lighter type that takes less knowledge to understand.

In answer to the question, "Name the five musical compositions we have played in band or orchestra that you like best," the answers were grouped into three general classes:

1. Difficult classical compositions.
2. Easier classical compositions.
3. Popular music.

Table XVIII shows the answers grouped in these three classes, giving the per cent of each group, and the type of music liked best.

TABLE XVIII
TYPE OF MUSIC THE STUDENT LIKED BEST OF THE MUSIC HE HAS PLAYED

Type of Musical Composition	20 Best Musicians	60 Average Musicians	20 Poorest Musicians
Classical (heavy)	.90	.67	.40
Classical (light)	.10	.31	.60
Popular	0	.02	0

Here is evidence supporting the contention that no matter why a student participates in instrumental music, he is learning to appreciate good music. We find the same thing holding true here, as in the matter of radio programs, the better type musician selected the better type music.

The reason this report was more gratifying than the report on radio programs, was due to the fact that when the student really learned a fine piece of music he enjoyed playing it better than the lower type music.

The following statement is probably true that any student who hears any one of the compositions he really knows on the radio is going to enjoy it much more than a musical composition he knows nothing about.

Table XVIII is also an answer to the statement that music teachers are presenting music far too difficult for the average school musician to perform. Even so, he learns to appreciate good music and will enjoy hearing it the rest of his life. In fact, the most difficult musical

composition, technically, that the orchestra performed in three years, was voted the best liked musical composition by the orchestra, as the most difficult composition played by the band in three years was voted the best liked musical compositon by the band.

CHAPTER IV

CONCLUSION

Summary

The remarkable progress made in the development of a well-rounded Instrumental Music Program in our Public Schools, has been very gratifying to those interested in the better things of life. But many instrumental music programs have failed or at least fallen short of the greatest possible success because the music instructors, themselves, have been working in the dark on the matter of why some students are very successful in the study of instrumental music, while others fail to show any decided progress. This situation is due to the fact that very little actual research has been made in the matter of why some students succeed and others fail. It was with the above thought in mind that this study was undertaken.

The problem concerned is to determine the factors causing one group to succeed while another group fails. The factors studied in this survey may be classed under ten main heads.

1. Natural musical ability.
2. General acquired ability.
3. Family background.
4. Marks in other subjects.
5. I. Q.
6. Effort

7. Health

8. Participation in Church work.

9. Educational and occupational intention.

10. Likes and dislikes in regard to music.

The students selected for this study were 100 members of the Stillwater, Oklahoma, High School Advanced Band and Orchestra of the school year, 1936-37. These students were from the ninth to twelfth grades, inclusive. They were divided into three groups by the instructor: the twenty best musicians, the twenty poorest musicians, and the sixty students in the group between the two extremes. They had been in the Public School system of Stillwater, Oklahoma, for at least two school years. The test and questionnaire methods were both used in this study, because some types of information were available only through questionnaires. These data are presented in such a way as to show a comparison between the good musicians and the poor musicians. Also the comparison between the good musicians and the average, the average and the poor.

From the results of the tests and questionnaires we find the following characteristics in good musicians, that are not found to the same extent in the average or poor musician: very high natural ability, better family background, higher grades in other subjects, higher I. Q's, greater enjoyment of good music, and more general acquired ability. The results also bear out the fact that the

average students possess these same characteristics in a greater degree, to about the same extent, over the poorest musicians.

The factors examined that seemed to have little or no effect on the success of a student in instrumental music were: effort, health, Church work, and educational and occupational intention. While there were some little differences found in some of these factors among the three groups, not enough difference was found to justify the statement that these things were factors in the success of a student in instrumental music.

The Contribution of This Study

The chief contribution of this study is the determination of factors that are responsible for a student's success or failure in instrumental music. Thereby making it possible for the music instructor by checking a group of prospective music students on these factors, to predict the success they will have in instrumental music. Also making it possible with these factors in mind to advise a student as to whether he would be wise to choose music as a vocation. Further, with this material in mind, it would be possible for the teacher to check to see if his teaching is getting the maximum amount of results, and also acts as a check on the student to see if he is doing as well as he should.

That the above results may be useful can easily be seen, in that this study for the first time makes available to the teacher data on all of these characteristics combined in one study. Application of the indicated factors of value is a matter easily handled.

Limitations of This Study

Due to the fact that all the cases examined had made at least a reasonable amount of success in instrumental music, or they would not have been in the advanced groups examined, the results may not be as decisive as if the students who had made complete failures of music had been included. An addition of these cases to the study would not, in the writer's opinion, alter the results shown, but would probably emphasize them.

It is quite possible that some factors that affect students' success in instrumental music have been omitted, but probably enough of them have been covered to at least give a foundation upon which to work.

Suggestions for Further Investigations

Any one of the ten factors mentioned in this thesis should prove to be an interesting study. Where this study touches on each factor briefly, it would be possible to make an exhaustive study of each factor, as an individual and complete study, which might lead to some interesting and valuable information. The factors of health, likes and dislikes, effort, church work, and educational and occupational intention, any one of which might prove in itself to be a valuable study.

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